AGRICULTURAL PEAK LOAD REDUCTION PROGRAM

Project Fact Sheet

Variable Speed Controlled Refrigeration System

GOALS

- Reduce peak electricity usage
- Reduce maintenance costs

PROJECT DESCRIPTION

This project is located at Valley Fig Growers in Fresno, CA and consisted of replacing two older constant speed refrigeration compressors (1 @ 100-hp and 1 @ 60-hp) with two new units (1 @ 75-hp and 1 @ 60-hp) and an Einstein variable speed controller.



Compressor Rack and Einstein Controller

The old units ran at full speed and excess refrigerant was bled off. The new units run at a speed governed by cooling demand, which produces just enough refrigerant to satisfy that demand.

The demand based variable speed control of the new refrigeration system resulted in a forty-eight and four tenths kilowatt (48.4 kW) electrical demand reduction.

SITE BENEFIT

The site benefits from reduced maintenance and energy costs.

INDUSTRY BENEFIT

The industry will benefit by considering these upgrades in future capital replacement plans. The power saved during the peak period benefits the entire State of California.

FUNDING AMOUNT

- Project Cost \$110,262.00
- Agricultural Peak Load Reduction Program Contribution \$12,100.00 (Awarded at \$250/kW reduced demand)

FOR MORE INFORMATION

Ricardo Amon, Program Manager California Energy Commission 1516 Ninth Street, MS-43 Sacramento, CA 95814-5504 (916) 654-4019 ramon@energy.state.ca.us Bob L. Hall, P.E., Program Manager Agricultural Peak Load Reduction Program Center for Irrigation Technology California State University, Fresno 5370 N. Chestnut Ave., M/S OF 18 Fresno, CA 93740-8021 (559) 278-5389 bhall@csufresno.edu